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(54) Title: AUTONOMOUS SYSTEM FOR AUTOMATIC PICKING AND BOXING OF FRUITS AND METHOD OF MANEUVERING SAME

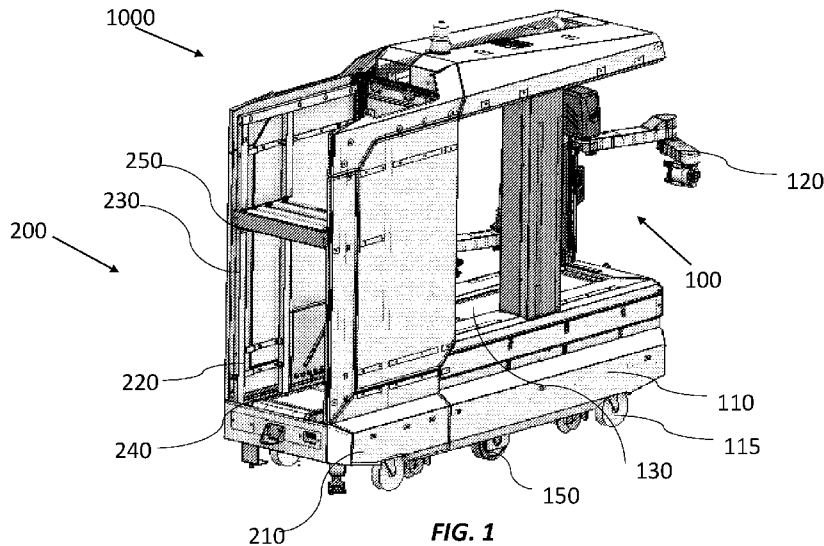


FIG. 1

(57) Abstract: An autonomous system for automatic picking and boxing of fruits is disclosed. The system may include a movable picking unit, comprising: a first movable platform; one or more robotic arms connected to the movable platform; and a fruit conveyor. Each robotic arm may be configured to pick at least one fruit at a time and place the at least one picked fruit on the fruit conveyor. The system may further include: a movable boxing unit, comprising: a second movable platform; a containers gripper; a containers' lift; and a container's conveyor. The container's conveyor may be configured to receive a container from the containers gripper and convey the container to a fruit receiving position, at which the container receives fruits from the fruits' conveyor.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER		
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According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A01D 46/30; A01D 46/22; A01G 9/14 CPC:A01D 46/30; A01D 46/22; A01G 9/143		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Databases consulted: Esp@cenet, Google Patents, Orbit, Similari (AI-based)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2018087546 A1 (Dogtooth Technologies Limited) 17 May 2018 (2018-05-17) Entire Document	1-16
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "D" document cited by the applicant in the international application "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 27 October 2022		Date of mailing of the international search report 31 October 2022
Name and mailing address of the ISA/IL Israel Patent Office Technology Park, Bldg.5, Malcha, Jerusalem, 9695101, Israel Israel Telephone No. 972-73-3927243 Email: pctoffice@justice.gov.il		Authorized officer SABHAT Avraham Telephone No.

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.c of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of a sequence listing:
 - a. forming part of the international application as filed.
 - b. furnished subsequent to the international filing date for the purposes of international search (Rule 13ter.1(a)),
 accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this report has been established to the extent that a meaningful search could be carried out without a WIPO Standard ST.26 compliant sequence listing.
3. Additional comments:

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2018087546	A1	17 May 2018	WO	2018087546	A1	17 May 2018
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				CN	110139552	A	16 August 2019
				EP	3537867	A1	18 September 2019
				US	2019261565	A1	29 August 2019
				US	10757861	B2	01 September 2020
				US	2019261566	A1	29 August 2019
				US	10779472	B2	22 September 2020
				US	2021000013	A1	07 January 2021
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